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### **REMARKS**

The present response is intended to be fully responsive to all points of objection and/or rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Applicant asserts that the present invention is new, non-obvious and useful. Prompt consideration and allowance of the claims is respectfully requested.

### **Status of Claims**

Claims 1-27 are pending in the application.

Claims 1-24, 26 and 27 have been rejected.

Claims 10 and 25 have been objected to.

Claims 1, 15, 19 and 25 have been amended in this submission. In making such amendments, no new matter has been added.

Claims 5 and 24, 26 -27 have been canceled without prejudice or disclaimer. In making this cancellation without prejudice, Applicant reserves all rights in these claims to file divisional and/or continuation patent applications.

### **Allowable Subject Matter**

In the Office Action, the Examiner stated that claims 10 and 25 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Applicant respectfully asserts that claim 25 has been rewritten in independent form including all the limitations of the base claim and any intervening claims. Applicant respectfully asserts that such claim 25 is now allowable and requests the Examiner to withdraw his objection. Claim 10 depends from independent claim 1, as amended. As described in this paper, claim 1, as amended is allowable. Claim 10 includes all of the elements of claim 1, and is therefore also allowable.

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## **CLAIM REJECTIONS**

### **35 U.S.C. § 112 Rejections**

In the Office Action, the Examiner rejected claim 18 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In such rejection, Examiner asserts that in claim 18, line 1, the term "said conductive element" has no antecedent basis. Applicant respectfully points to line 8 of claim 15 from which claim 18 depends, wherein the term "a conductive element" is included in an element of the claim. Applicant therefore respectfully requests Examiner to reconsider the objection to such claim 18 under 35 U.S.C. § 112. Applicant asserts that dependent claim 18 is allowable.

### **35 U.S.C. § 102 Rejections**

In the Office Action, the Examiner rejected claims 1-6, 9, 11-13, 19-21, 24, 26 and 27 under 35 U.S.C. § 102(b), as being anticipated by Nakatani et al. (US Patent No. 6,096,411, "Nakatani"). Applicant respectfully traverses this rejection in view of the remarks that follow.

Applicant's independent claim 1, as amended, includes, inter alia, filling said plurality of said holes by capillary force. Applicant's independent claim 19, as amended, includes, inter alia, forcing, by capillary force, a conductive liquid into a plurality of holes in a non-conductive substrate. In order for a reference to anticipate a claim under 35 U.S.C. 102(b), the reference must teach every element of the claim being rejected. Nakatani does not disclose filling holes by capillary force. Applicant therefore asserts that independent claims 1 and 19, as amended, are not anticipated by Nakatani.

Applicant asserts that the invention in Nakatani teaches away from the Applicant's claimed invention in that the holes described in Nakatani are of 0.2 mm (col. 15, line 64), a size which is generally not consistent with capillary action as a filling force. Similarly, the conductive element in Nakatani is primarily described as a paste, which is also not readily susceptible to capillary force in a small hole. In light of the above, Applicant respectfully requests the Examiner to withdraw the rejection of independent claims 1, and 19, as amended as being anticipated by Nakatani.

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Applicant's dependent claims 2-4, 6, 9, 11-13, 20-21 depend from one of independent claims 1 and 19, as amended, and thereby include all of the elements of claim 1 and 19, respectively. Therefore, dependent claims 2-4, 6, 9, 11-13, 20-21 are likewise allowable. Applicant respectfully requests that the Examiner withdraw his rejection of dependent claims 2-4, 6, 9, 11-13, and 20-21 as being anticipated by Nakatani. Claims 5, 24, 26 and 27 have been cancelled and are moot.

### 35 U.S.C. § 103 Rejections

In the Office Action, the Examiner rejected claims 22 and 23 under 35 U.S.C. § 103(a), as being unpatentable over Nakatani.

Applicant's claim 19, as amended, includes forcing, by capillary force, a conductive liquid into a plurality of holes. As described above, Nakatani does not disclose filling holes by capillary force and does not anticipate Applicant's independent claim 19, as amended. Dependent claims 22 and 23 include all of the elements of independent claim 19, as amended, and are therefore likewise not anticipated by Nakatani. Applicant therefore respectfully requests that Examiner withdraw the rejection of claims 22 and 23 as being unpatentable over Nakatani.

In the Office Action, the Examiner rejected claims 7, 8 and 14 under 35 U.S.C. § 103(a), as being unpatentable over Nakatani et al. in view of Higuchi et al. (US Patent No. 6,831,236 "Higuchi"). Applicant's claim 1, as amended, includes filling a plurality of holes by capillary force.

As described above, Nakatani does not disclose filling holes by capillary force and does not anticipate Applicant's independent claim 1, as amended. Higuchi likewise does not disclose filling holes by capillary force and therefore does not cure the deficiencies of Nakatani, nor would it have been obvious to combine Nakatani and Higuchi to teach forcing by capillary force a conductive liquid into a plurality of holes.

Dependent claims 7, 8 and 14 include all of the elements of independent claim 1, as amended, and are therefore likewise not anticipated by Nakatani in view of Higuchi. Applicant therefore respectfully requests that Examiner withdraw the rejection of claims 7, 8 and 14 as being unpatentable over Nakatani in view of Higuchi.

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In the Office Action, the Examiner rejected claims 15, 16 and 18 under 35 U.S.C. § 103(a), as being unpatentable over Nakatani in view of Yamazaki et al. (US Patent No. 6,198,060 "Yamazaki"). Applicant's independent claim 15, as amended, includes, inter alia, filling, by capillary force, a conductive liquid into a plurality of holes in a non-conductive substrate. Nakatani does not disclose filling holes by capillary force. Yamazaki does not disclose filling holes by capillary force and hence does not cure the deficiencies of Nakatani, nor would it have been obvious to combine Nakatani and Yamazaki to teach forcing by capillary force a conductive liquid into a plurality of holes. An obviousness rejection requires a teaching or a suggestion by the relied upon prior art of all the elements of a claim (M.P.E.P. §2142). Applicant therefore asserts that independent claim 15, as amended, is not anticipated by Nakatani in view of Yamazaki.

Dependent claims 16 and 18 include all of the elements of independent claim 15, as amended, and are therefore likewise not anticipated by Nakatani in view of Yamazaki. Applicant therefore respectfully requests that Examiner withdraw the rejection of claims 16 and 18 as being unpatentable over Nakatani in view of Yamazaki.

In the Office Action, the Examiner rejected claim 17 under 35 U.S.C. § 103(a), as being unpatentable over Nakatani et al. in view of Yamazaki et al. as applied to claims 15 and 16 above, and further in view of Higuchi et al. and Kawakubo (US Patent No. 6,936,777 "Kawakubo").

As described above Applicant's independent claim 15, as amended, includes, inter alia, forcing, by capillary force, a conductive liquid into a plurality of holes in a non-conductive substrate. Nakatani does not disclose filling holes by capillary force. None of Yamazaki, Higuchi or Kawakubo, alone or in combination, teach or disclose filling holes by capillary force and hence does not cure the deficiencies of Nakatani. Dependent claim 17 depends from claim 15, and therefore includes all of the elements of claim 15. Applicant therefore asserts that independent claim 17, as amended, is not anticipated by Nakatani in view of Yamazaki and further in view of Higuchi and Kawakubo.

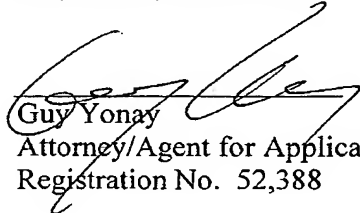
In view of the foregoing amendments and remarks, the pending claims are deemed to be allowable. Their favorable reconsideration and allowance is respectfully requested.

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Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

Please charge any fees associated with this paper to deposit account No. 50-3355.

Respectfully submitted,

  
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Dated: September 18, 2006

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